

Application No. 10/591,622
Amendment Dated January 14, 2009
Reply to Office Action Dated November 14, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (previously presented) An electric field control material including a polymer matrix in which is dispersed a so-called non-linear filler having non-linear electric resistance properties, wherein the non-linear filler includes at least 97% by weight of zinc oxide as a homogeneous powder, and less than 3% by weight of at least one metal oxide as traces.
2. (previously presented) The material according to claim 1, wherein the non-linear filler includes less than 99.8% by weight of the zinc oxide as a homogenous powder.
3. (previously presented) The material according to claim 1, wherein the grains composing the zinc oxide powder of the non-linear filler have dimensions in majority less than 50 μm .
4. (currently amended) The material according to claim 1, wherein said each metal oxide is ~~selected from the group consisting of~~ lead oxide, ~~cadmium oxide, iron(III) oxide, copper oxide and manganese oxide~~.

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5. (previously presented) The material according to claim 1, wherein the zinc oxide of the non-linear filler is doped with at least one non-metal element.

6. (previously presented) The material according to claim 5, wherein each non-metal element is sulphur or boron.

7. (currently amended) The material according to claim 1, further comprising ~~wherein it includes a so-called~~ linear filler having linear electric resistance properties.

8. (previously presented) The material according to claim 7, wherein the volume of the linear filler accounts for less than 25% of the volume of the non-linear filler.

9. (currently amended) The material according to claim 1, further comprising ~~wherein it includes~~ an insulating filler.

10. (previously presented) The material according to claim 9, wherein the insulating filler accounts for less than 10% by volume of said material.

11. (currently amended) The material according to claim [[1]] 7, wherein the non-linear or the combination of the non-linear and the linear filler volume substantially accounts for

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5 to 60% of the volume of said material.

12. (previously presented) The material according to claim 1, wherein the zinc oxide has a direct current resistivity which is less than $10^9 \Omega \cdot \text{m}$.

13. (previously presented) A termination for an electric cable, wherein it includes at least one electric field distributor element, including a material according to claim 1.

14. (previously presented) A connecting device for electrical cables, wherein it includes at least one electric field distributor element including a material according to claim 1.

15. (previously presented) A current limiting device, wherein it includes at least one PTC effect element, including a material according to claim 1.

16. (previously presented) A power cable, wherein it includes at least one electric field distributor element including a material according to claim 1.

17. (previously presented) Self-regulating heating cable, wherein it includes at least one PTC effect heating element including a material according to claim 1.

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18. (previously presented) The material according to claim 3, wherein the grains composing the zinc oxide powder of the non-linear filler have dimensions in majority less than 10 μm .

19. (previously presented) The material according to claim 11, wherein the non-linear or the combination of the non-linear and the linear filler volume substantially accounts for 15 to 40% of the volume of said material.

20. (previously presented) The material according to claim 12, wherein the zinc oxide has a direct current resistivity which is less than $10^8 \Omega\text{.m}$.